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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/701,306

11/04/2003

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5038

26530 7590 04/26/2007
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EXAMINER

NGUYEN, LINH M

ART UNIT

PAPER NUMBER

2816

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

04/26/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/701,306

Applicant(s)

JUNG, HEA SUK

Examiner

Linh M. Nguyen

Art Unit

2816

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 March 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 14 and 15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 14 and 15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>09/15/06</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This is a response to Applicant's amendment filed On 03/14/2007. By virtue of this amendment, claims 14-15 are presented in the instant application.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 14 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fujieda et al. (U.S. Patent No. 6,181,174) in view of Muraki et al. (U.S. Patent No. 6,360,328).

With respect to claim 14, Fujieda et al. discloses, in Figs. 27 and 28A, a synchronous memory device for synchronization of an external input clock [Fig. 27, item 10] with an internal [Fig. 27, output from 46A] input clock comprising a delay locked loop (DLL) having a clock divider [Fig. 27, items 36,38], a power down controller [Fig. 27, item 53] for determining a power down condition based at least on a predetermined state of a clock enable signal [Fig. 28A, RESET signal] (*Fig. 28A shows a frequency dividing ratio setting part, indicated as item 53 in Fig. 27, see col. 4, lines 8-10*) inputted to the DLL, and wherein the clock divider outputs a first clock signal and a second clock signal.

Fujieda fails to explicitly disclose that the clock divider outputs a first clock signal when the synchronous memory device is in a power down condition and a second clock signal when the synchronous memory device is in a non-power down condition and wherein a frequency of the first clock signal is lower than that of the second clock signal.

Muraki et al. discloses, in column 1, lines 41 to 45, that one of various means for power down modes is to reduce the frequency of the clock and obviously clock divider is one of the means to reduce frequency of the clock.

It would have been obvious to one of ordinary skill in the art at the time of the invention to establish a power down mode by selecting a low frequency for the clock via the frequency dividing ratio setting part [53] in the circuit of Fujieda et al. to reduce wasteful power consumption since such configuration for the stated purpose has been a well known practice as evidenced by the teachings of Muraki et al. (*see Muraki et al., col. 1, lines 41-45*).

With respect to claim 15, the combined teaching of Fujieda et al. and Muraki et al., discloses that the frequency of the second clock signal is $2M$ when the frequency of the first clock signal is M (*since 53 selects the dividing ratio for divider (36,38), dividing ratio can be selected so that the first clock signal frequency (power down mode) is M and the second clock signal frequency is $2M$ (non-power down)*).

Remarks

2. The Applicant provided no argument along with the amendment submitted on 03/14/2007.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

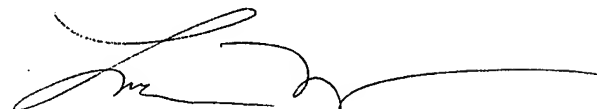
Inquiry

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Linh M. Nguyen whose telephone number is 571-272-1749. The examiner can normally be reached on 5:30-3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert J. Pascal can be reached on 571-272-1769. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

LMN



**LINH MY NGUYEN
PRIMARY EXAMINER**